

Name \_\_\_\_\_

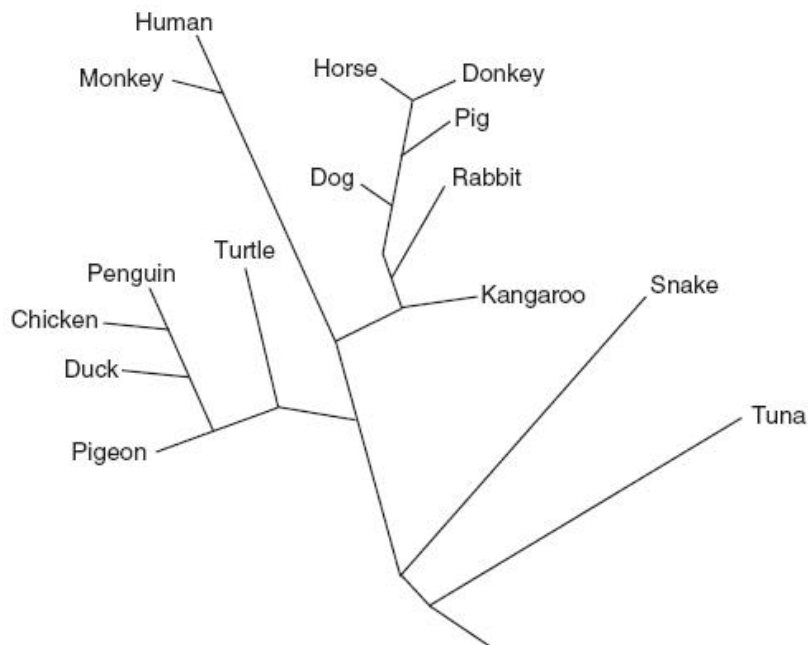
## Keystone Warm-ups Evolution Unit

*Copy down all 4 answer choices for the daily warm-up from the board in the space below its question. Choose the best answer by circling its letter. Then, after we go over it, write the correct answer in the block provided on the front of the packet.*

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1. Based on their analysis of the differences in amino acid sequences of one kind of protein, scientists prepared the evolutionary tree shown below.

According to this diagram, the DNA of which pair of organisms would show the greatest similarity?



(A) penguin and turtle

(B) horse and donkey

(C) snake and tuna

(D) turtle and rabbit

2. Which statement is best supported by the theory of evolution?

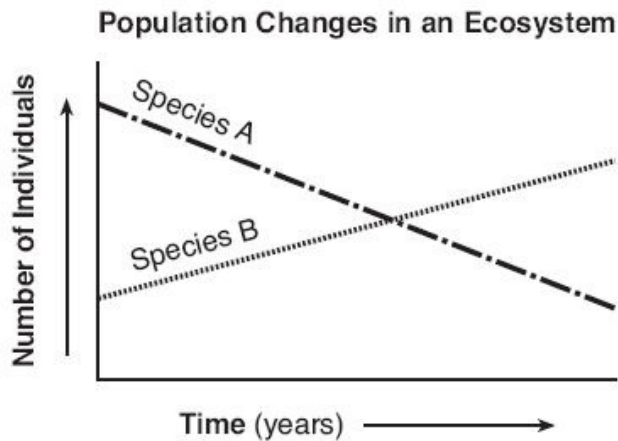
- (A) Genetic alterations occur every time cell reproduction occurs.
- (B) The fossil record provides samples of every organism that ever lived.
- (C) Populations that have advantageous characteristics will increase in number.
- (D) Few organisms survive when the environment remains the same.

3. Evolutionary changes have been observed in beak size in a population of medium ground finches in the Galapagos Islands. Given a choice of small and large seeds, the medium ground finch eats mostly small seeds, which are easier to crush. However, during dry years, all seeds are in short supply. Small seeds are quickly consumed, so the birds are left with a diet of large seeds. Studies have shown that this change in diet may be related to an increase in the average size of the beak of the medium ground finch.

The most likely explanation for the increase in average beak size of the medium ground finch is that the

- (A) trait is inherited and birds with larger beaks have greater reproductive success
- (B) birds acquired larger beaks due to the added exercise of feeding on large seeds
- (C) birds interbred with a larger-beaked species and passed on the trait
- (D) lack of small seeds caused a mutation which resulted in a larger beak

4. The graph below represents the populations of two different species in an ecosystem over a period of several years.



Which statement is a possible explanation for the changes shown?

- (A) Species A is better adapted to this environment.
- (B) Species A is a predator of species B.
- (C) Species B is better adapted to this environment.
- (D) Species B is a parasite that has benefited species A.

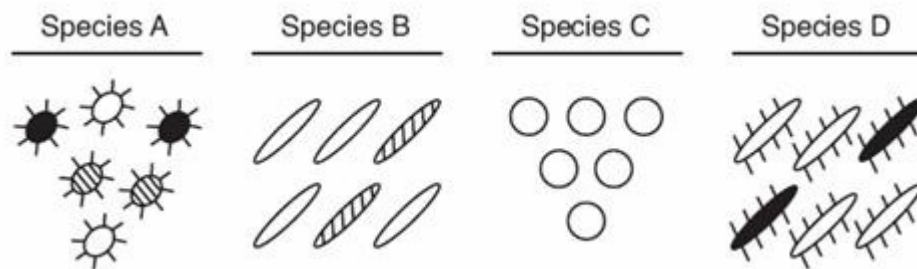
5. When is extinction of a species most likely to occur?

- (A) when environmental conditions remain the same and the proportion of individuals within the species that lack adaptive traits increases
- (B) when environmental conditions remain the same and the proportion of individuals within the species that possess adaptive traits increases
- (C) when environmental conditions change and the adaptive traits of the species favor the survival and reproduction of some of its members
- (D) when environmental conditions change and the members of the species lack adaptive traits to survive and reproduce

6. Certain insects resemble the bark of the trees on which they live. Which statement provides a possible biological explanation for this resemblance?

- (A) The insects needed camouflage so they developed protective coloration.
- (B) Natural selection played a role in the development of this protective coloration.
- (C) The lack of mutations resulted in the protective coloration.
- (D) The trees caused mutations in the insects that resulted in protective coloration.

7. The diagram below represents four different species of bacteria.



Which statement is correct concerning the chances of survival for these species if there is a change in the environment?

- (A) Species A has the best chance of survival because it has the most genetic diversity.
- (B) Species C has the best chance of survival because it has no gene mutations.
- (C) Neither species B nor species D will survive because they compete for the same resources.
- (D) None of the species will survive because bacteria reproduce asexually.

8. In North America, the eastern spotted skunk mates in late winter, and the western spotted skunk mates in late summer. Even though their geographic ranges overlap, the species do not mate with each other. What most likely prevents these two species from interbreeding?

(A) habitat isolation

(B) gametic isolation

(C) geographic isolation

(D) temporal isolation